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AROUND THE LAKES.

CLEVELAND.

Schooner Jura, Captain Peterson will go to Huron to lay up.

The master of schooner J. S. Richards has resigned and Captain Brady appointed in his stead. The Richards goes to Escanaba with coal.

The Canadian schooner Lewis Ross, which put in here leaking, is in Globe drydock having repairs made, which consist of some new plank, and calking buts and garboard strake.

Judge Welker of the United States district court will devote the first week of the next term of the court, which convenes on the 6th of next month, to the hearing to admiralty cases.

Mr. H. D. Root of Vermillion was in the city yesterday, Mr. Root is building a small tug at Vermillion for parties at that port. The dimensions are length 40 feet, beam 9 feet, depth 3 feet.

The lumber cargo of schooner Lewis Ross was lightered off in order that she might go into drydock to have a leak stopped. She was on the way to Buffalo but the water gained so fast that the captain deemed it prudent to put into this port for repairs.

Mark Hopkins' yacht Permelia, stopped at this port on her way to Detroit Monday. The Permelia has been to New York where new Hazelton boilers were put in. It is now claimed she can carry two hundred pounds of steam and speed twenty-five miles per hour.

Captain William H. Pringle, formerly of Cleveland, but now residing at San Diego, Cal., has been appointed a member of the lighthouse board, and assigned to the Pacific Coast district. Captain Pringle is well known on the lakes and was the first master of the big steamship Onoko.

The yachts Creon, owned by McEachran and Rickster Bros., and the Commodore Gardner, owned by Messrs. Rice, Short and others, valued at $500 each went ashore and pounded to pieces. They were anchored behind the breakwater. The life savers made strenuous efforts to save them but without avail.

The storm of Tuesday struck this port with great fury, detaining many vessels intending to depart and compelling the propeller Newburg, bound in, to run for the north shore. Schooner Southwest, Captain Fish, grain laden from Detroit, appeared off this port about 5 o'clock and as no tug could go to her she sailed inside the piers in good shape, when tug Dreadnaught took her line. The lighter, and the men at work on the water works crib were brought inside by one of Smith's tugs.

The new fishing tug Markwell, built by Mr. Root at Vermillion, put in appearance here Tuesday for register and to have her boiler tested. She has a beautiful model and it is thought will be smart. Length 53 feet, beam 11½ feet, depth 5 feet. She has double engines, 6¼x8 inches and boiler formerly in the steam yacht Olive of Sandusky. Inspector Fitzpatrick tested the boiler, which has been thoroughly rebuilt and repaired, to 150 pounds cold water pressure. Captain H. Pelton, part owner, will be master of the new tug and Henry Bumhardt engineer.

On Tuesday, while Dr. Hull was fishing from the west end of the breakwater, he discovered the body of a man floating in the lake and with assistance succeeded in getting it ashore. The body had been in the water five or six days, possibly longer. In life the man was about five feet eight inches in height, and weighed about 150 pounds; hair black sprinkled with gray; clothing consisted of gray coat, gray woolen shirt, checked pantaloons and black diagonal vest. A knife and pocket book were found on the body. He probably fell overboard from a vessel. Any one desiring information should address Dr. Herman Bock, Coroner, Cleveland.

Schooner Zack Chandler, Captain Carlton Graves, arrived with lumber from Ontonagon. Quite an episode took place on board the Chandler while at Ontonagon. It seems that at each visit of the schooner to that place this season the mate Mr. Orville Weeks has persisted in making love to a chaming girl, Miss Carrie Winter, the result of which was a wedding on board the boat, attended by a merry party. The happy couple came down on the Chandler to this city. It is not necessary to say that they are well mated and we do not hesitate to say that their ship will come into port each season with good freight as Mrs. Carrie Weeks is the daughter of an old sailor.

CHICAGO.

Special to the Marine Record.

The steambarge N. K. Fairbank, iron ore laden, arrived at this port from Escanaba on the 20th, with Captain Richard Neville, recently commander of the Jarvis Lord, in command.

The steamship John B. Lyon and consort J. D. Sawyer, were chartered Monday for corn to Buffalo at 1¼c. per bushel, and her other consort, the John M. Hutchison, for wheat at 1½c. per bushel. The schooner O. M. Bond for corn to Kingston at 3½c. The propeller William Edwards and consorts Golden Age, Foster and Page have been waiting here for charters for two weeks.

The schooner Belle Brown arrived Monday evening with her flag at half mast, having lost Michael Scanlan overboard a few miles down the lake. He lived in Kingston and was 25 years old.

Captain David Dall has libeled the tug N. Avery, of Muskegon, for $1,100 for damages sustained to his schooner, John Bean, Jr., when in tow of the tug.

Paul Poullot, yacht and boat builder, has completed a steam launch for D. C. Palmeter, of Chicago. Her dimensions are length over all 25 feet, beam 5 feet 3 inches, depth 2 feet 4 inches. She will go on the cars to Berlin, Wis., and will be used on Oshkosh river.

The old pleasure steamer Bret Harte will come into service again. The machinery of the tug L. Anthony, burned some time ago off Chicago, and recently recovered by Captain Falcon, will be placed in the Harte. The hull of the Harte has been used as a bumboat at the breakwater during the summer months, her machinery having been taken out last winter and placed in a new hull which was built by W. W. Bates, and now known as the pleasure steamer Charm.

The tug Thomas Spear, Captain P. Plain, arrived Tuesday morning with a scow, laden with 300,000 feet of lumber. Captain Plain says the reports which have gone the rounds of the newspapers as to the going ashore of the scows he was towing on the 8th instant are incorrect. The facts are that he was caught in the heavy gale when on his way from Big Bay De Noque to Chicago, with the two scows, each laden with 350,000 feet of lumber. He ran into Milwaukee Bay and whistled for assistance, but not getting any, he fastened the tug's anchor to the tow rope and cast it overboard, as the tug was partly disabled, with about three feet of water in her hold, occasioned by the heavy seas having burst in the engine room door. The tug then went into Milwaukee for help, the scows rode at anchor for about three hours, but went ashore before assistance was procured. About 60,000 feet of lumber was lost off the scows. Captain Plain succeeded in pulling off one of the scows and took her into Milwaukee where she has been repaired at the Milwaukee Shipyard Company's. Starkey Brothers, tug owners, Milwaukee, have contracted to get the other scow, which is ashore at the foot of Wisconsin street, Milwaukee, off for $500.

At the Chicago Drydock Company's the barge Newcomb had a leak stopped; the schooner R. B. King was calked all over; the schooner W. H. Dunham got a new foremast; the steambarge Argonaut a new main mast; the schooner Chester B. Jones some new plank in her bow; the schooner W. H. Sage some new timber heads; the barge Wm. Crosthwaite a new anchor stock; the schooner Myrtle a new main boom.

At Miller Brothers Drydock the tug Viva had her shoe fixed; the scow Spray some new plank in her bottom and calking; the tug Sheriffs for similar repairs; tugs Bob Teed and Thomas Hood had their stern bearings fixed at the derrick.

The funeral of the late Captain A. E. Goodrich, which took place on Thursday last, was largely attended.

Captain A. E. Goodrich's will was probated Monday. To his three sisters he leaves a legacy of $5,000 each, and to his wife and son Albert W., he gives the remainder of his property, which is worth about $560,000.

The steambarge William Edwards and consort Golden Age left to-day (Wednesday) light, for Marquette, to load iron ore for Cleveland.

The tug Prindiville broke her shaft last week, and has been laid up.

Transfers and sales at Chicago Custom House Sept. 23: Geo. M. Case, ass't of mortgage, whole, $2,000, Nelson S. Whipple to Alden F. Barker. Sept. 23, schooner Geo. M. Case, release, whole, $2,000, Alden F. Barker to Wm. McDonald.

WILLIAMS.

MILWAUKEE.

A survey has been made on the barge D. K. Clint, which was damaged in the big gale on Lake Huron, the result of which has not yet been made public.

The schooner G. G. Houghton takes 22,000 bushels of wheat to Port Colborne at 2½ cents.

P. A. Stamm, owner of the schooner H. M. Scove, telegraphed Captain Cayne to have repairs made at Cheboygan. The Scove is at the Sault with her stem, bowsprit and jibboom gone, the result of a collision with the propeller United Empire off Keweenaw Point. She was bound light to Bass Island and was towed back by the United Empire

Shippers were on Saturday inquiring for a vessel to load wheat for Cleveland, and another for St. Catharines, but none were to be had.

The schooner Surprise, wood laden, sprung aleak while lying at a Charlevoix dock Saturday. The Captain telegraphed for the tug Hall at Frankfort, which arrived and left with her this morning for Milwaukee. Going out the line parted and she ran into a lumber pile, breaking her jibboom. The pumps kept her free.

Three scows with steam pumps and a gang of men were sent out to release a scow that had been ashore in the bay for two weeks. When the gale came on the scows were towed under the breakwater, but seven men were left working on the stranded scow. The sea broke over the scow leaving the men in a dangerous position. No rescue could be made by several hundred persons gathered on the shore. They were finally rescued with great difficulty by the lift saving crew.

The schooner Onward ashore at Gill's Pier, Mich., is reported to be going to pieces. She is valued at $3,000, and owned by Maxon Parker and Saveland of this port. Neither vessel or cargo are insured.

The steamboat Thompson Kingsford has been ordered to the schooner R. J. Skidmore, which waterlogged and was beached near Leland, Mich., to save her. She is owned by H. J. Pauly, of this port, and is uninsured.

ESCANABA.

The propeller Merrimac came back Friday morning towing the propeller Inter-Ocean, having picked her up off Plum Island with her machinery disabled. She broke down off Ahnapee during Thursday's gale. She rolled so heavily that at times the captain thought she would founder. She is leaking some. The tug Delta brought in the barge R. J. Carney. The Inter-Ocean was ore laden, from this port to Chicago.

SOUTH HAVEN.

The body of John Swails, mate of the schooner O. S. Swails, was washed ashore Wednesday and buried. He was knocked off by the foreboom on September 5. He was 26 years old.

BUFFALO.

Special to the Marine Record

Sept. 23.—The past few days, and in fact this week, has been very dull for all business connected with lake carrying trade. A large amount of grain has found its way to Buffalo in a few days. This week's receipts are high, and will reach in the next forty-eight hours, corn, 247,000, bu., and wheat 299,000, and a total on storage, 3,569,554 bu.

The coal trade is about done for the season. There is no pressing need of forcing shipments in any direction, as the supply has reached the actual wants. Of course, at a low rate they will ship more yet, because coal is a commodity that is always salable in the west at a fair price; but the demoralization of that branch of our industry is at present great, and no calculation can be made of the results to-day, or from one day to another. Railroads are carrying coal cheap, and the large tonnage capacity of the lakes to-day is of such a character as to move in one month nearly one-third of all the supply wanted for a year, and when we find parties who heretofore at this season of the year would freely pay from $1.00 to $1.50 per ton are now offering 25c per ton, it shows us that we are not aware of all the facilities that are at work filling out orders and supplying the western markets. I quote freights on coal by lake, to Chicago, 40c., Milwaukee, 40c.; Lake Superior, Washburn, 40c., Superior City, 25c., Duluth, 25c. Dull at that. No anxiety to ship.

Many of the line boats are laid up, and others are to be as they come in, if freights do not improve, and that is not at present likely.

Messrs. H. G. Trout & Co. have received a letter from Ruddock, Nuttall & Co., owners of the steamer Fayette, saying that "the captain is much pleased with the propeller wheel furnished by them and that it is all that it was represented to be."

Mrs. Shannon, wife of Captain Shannon of propeller Tioga died at Buffalo last Friday. Captain Shannon did not reach home in time to receive her last words. He has the sympathy of all.

At the meeting of the board of managers of the Lake Carriers' Association last Thursday a communication was read from the Chicago Board of Trade, requesting that a committee from the Lake Carriers' Association meet a committee from that body in Chicago, at as early a date as possible with reference to the perfecting of a form of lake bill of lading. On motion of Captain Ash it was resolved that Frank T. Firth, Washington Bullard, Eber Ward, Joseph Austrian, and W. M. Egan be made a committee of five, with Mr. Firth as chairman, to confer with the Chicago Board of Trade with reference to the adoption of a uniform bill of lading for lake and lake and rail commerce, such committee to report back to the board for final action.

Business around the drydocks for the week has been dull. Steambarge J. S. Fay has been in Mills' dock for several days repairing damages received while ashore at Thunder Bay, Lake Huron, during the last gale. The amount of repairs will reach nearly $3,000. L. H. Worthington was in dock for new wheel and to calk bottom. In Union dock propeller St. Paul to have loose wheel tightened. While driving the key the hub was split. She will be detained several days awaiting a new wheel. Propeller Oneida takes her place in the line, but will resume her regular trips to Green Bay on her return. H. G. Trout, King Iron Works furnishes new wheels for St. Paul and L. H. Worthington. Repairs on the schooner John Wesley are progressing.

Schooner Nellie Reddington has finished her contract with the steamer Heela, and has left for Cleveland, possibly to lay up at that port.

WM.

MARITIME LAW.

SEAMEN RECOVER BUT HALF THE VALUE OF THEIR EFFECTS WHEN THEIR VESSEL IS PARTLY IN FAULT—THEY DO NOT CONTRIBUTE FOR LOSS OF CARGO—THE MASTER LIABLE TO CARGO OWNERS.

U. S. District Court, Southern District of New York.

This was a case of collision between the steamer City of New York and the bark Helen, by which the latter was sunk. Her owners libeled the steamer for the damage. Both vessels were held in fault at the trial. On the reference to compute the damages, the following questions were decided:

Libelants claimed to recover against the steamer for the whole loss of the effects of the master and crew of the bark. As one of the cardinal principles of maritime law identifies the interest of the mariner with interest of the ship and affects all with the fault of the ship, held, that since there was fault on the part of the bark as well as the steamer, the crew of the former should recover but half their damage.

Both vessels being liable for the loss of the cargo of the bark, claim was made that the seamen's effects should contribute to the loss of cargo. Held, that the liability of sea men to cargo owners for loss or injury to cargo is limited to cases of wilful default on the part of the seamen, and they should not, therefore, in this case, contribute for loss of cargo.

But the master of a vessel is responsible for the loss of cargo equally with the ship owner, without reference to any fault of his own, but by reason of his accountability for the acts or omissions of his subordinates. Held, therefore, that here the personal effects of the master of the bark should abide the fate of the vessel herself, and, like the bark and owners, be held to make up the bark's share of the loss of cargo.

Brown, J.

Upon the settlement of the decree a question has arisen in regard to the amount recoverable for the loss of the effects of the master and crew of the Helen, which was sunk, and also as regards the application of the sums allowed therefore. Both vessels were held in fault (15 Fed. Rep. 624; 23 do. 615,) and the damages were ordered to be divided. The libelants were the owners of the bark, and sued to recover for the loss of the ship, and also in behalf of the master and crew for the loss of their effects, as well also as carriers for the recovery of the loss of cargo, which belonged to third persons. The report on damages, as confirmed, shows a loss on account of the ship of $21,898.64, of $2,702.45 on account of the effects of the master and crew, and $27,004.64 on account of the cargo; the damages to the steamer, which were set up by way of recoupment in the answer, amount to $7,876.39. Both vessels being liable *in solido* for the loss of the cargo, the amount that would be recoverable for the loss of the ship must be applied to pay her share of the loss of the cargo, and it is insufficient for that purpose by several thousand dollars. The ship's share of the loss of the cargo is $13,502.31, while one-half the difference of the damages to the two vessels, which is the limit of her recovery against the steamer, is but $7,011.13.

For the effects of the master and crew the libelants claim to recover against the steamer the whole loss, upon the authority of the Titan (23 Fed. Rep. 413) That case, which was one of personal injuries upon a collision, was decided upon the authority of the Chicago, M. & S. P. RR. Co. vs. Ross (112 U. S. 377, 5 Sup. Ct. Rep.184.) The latter case arose from a collision of railroad trains, through negligence of a conductor to communicate to the engineer the orders which had been telegraphed by the superintendent to the conductor. The decision of the Supreme court was limited to the facts of the case, holding that "the conductor of a railway train who commands its movements, directs when it shall start, at what station it shall stop, at what speed it shall run, and has the general management of it, and control over the persons employed upon it, represents the company; and, therefore, that for injuries resulting from his negligent acts the company is responsible."

Some caution is, doubtless, to be observed in the application of decisions concerning railways to maritime collisions. In the case of the Titan there was personal fault of the master in command in not assigning any lookout, one of the functions of command; and it is upon this analogy, as regards the command of the vessel, that I understand that decision to be placed. But in the latter case of Quinn vs. N. J. Lighterage Co. (23 Fed. Rep. 363,) it was held that co-laborers take the risks of such negligent acts of the master as are not those of command, but are only such as any employe might perform. There seems to me considerable doubt whether the decision of the Supreme court in the Ross case was designed to introduce any modification in the maritime law as regards the liability of a vessel, or of her owners, to seamen or officers on board for injuries or losses sustained by them in the service of the ship. Such injuries and losses are as old as navigation. The maritime law, as respects personal injuries, has long been considered as well settled in limiting the recovery against the seaman's own vessel to wages for the rest of the voyage, and expenses of cure where the owners have not been in fault. (The City of Alexandria, 17 Fed. Rep. 390, and cases there cited.) If any different rule is hereafter to be applied as regards injuries happening through the commands of the master, the present is not such a case. Here the master was below and was not in any personal fault.

Claims for the loss of seamen's effects have been frequently included in the judgments of this court in collision cases, where the fault was wholly in the defendant's vessel. But I know of no case which such claims have ever been adjudicated against the seamen's own vessel where the loss was wholly by the fault of her own officers or men. No such claim could be entertained without overturning one of the cardinal principles of maritime law, which identifies the interests of the mariner with the interests of his ship, and affects all with the faults of the ship. As there was fault in this case on the part of the bark, as well as on the part of the steamer the claims of the crew against the steamer must be limited to one half their damages.

There is no rule, and no modern precedent, so far as I am aware, for holding the seamen, or any of the ship's company, below the master, responsible to cargo owners for injuries to cargo arising from mere negligence in the management of the ship. And if they are not legally responsible for such injuries, then their personal effects cannot be held to contribute for the loss of cargo. By the old Rhodian law there was apparently no distinction between master and mariner; each was alike answerable for his acts of negligence, and his own acts only. Article 26 provided that "if the master or any of the mariners lying ashore, the ship happens, during their absence, to perish, whether by night or by day, the master or mariners so lying ashore shall sustain the damage, and those who remain in the ship shall be free. And whatever damage befall a ship by any one's negligence, shall be refunded to the owners by the persons by whose fault it happened." By the 8th article it was provided that "if a master to whom the ship was intrusted, run away with her, with the consent of the mariners, into a foreign country, all their goods and whatsoever they possess shall be seized and sold, and if not sufficient to pay the value of the ship, the master and mariners shall be hired out till they have made satisfaction."

By article 10 it was also provided that if by the negligence of the master and mariners any damage or shipwreck happen, they shall be answerable for it. And, likewise, if by the fault of the merchant the ship and cargo perish, he shall sustain the loss. But if a shipwreck happen merely by misfortune, without any failure on either side, what can be saved of the ship and lading shall be prized and brought to a contribution."

In modern maritime law, so far as I can discover, the liability for injuries through neglect is confined to the owners of the ship and to the master, who is responsible for all subordinates who are appointed by him and are under his control, (Story on Agency, 314,317,) and that is the general rule in English and American law. Agents, or subordinates, are not in general responsible to third persons for mere non-feasances or omissions of duty in the course of their employment, there being no privity between them. (Lane vs. Cotton, 1 Ed. Raym. 655; Story on Agency, sections 308, 314.) The liability of seamen for loss or injury to cargo is limited to cases of wilful default. A recovery will, therefore, be allowed for the benefit of the seamen in this case to the extent of one-half the value of their effects without liability over to contribute for the loss of cargo.

By the English and American maritime law the master is responsible for the loss of cargo equally with the owners, without reference to any fault of his own, by reason of his accountability for the acts or omissions of his subordinates, as a kind of subrogated principal, says Story, and qualified owner, although his liability is more restricted on public vessels, where he does not appoint his subordinates, and is therefore, not responsible for their defaults. Nicholson vs. Morrissey, 15 East 384; Story agency, section 314; the Limerick, 1 Prob. Div. 411.)

It follows that in this case his personal effects must abide the fate of the ship herself, and like the ship and owners be held to make up the ship's share of the loss of cargo. The statute of 1851 limiting the liability of owners, excepted all existing remedies against the master, officers, or mariners for loss or injury of cargo. (Rev. St. Section 4287.) The amount of $689.90 being one-half the amount of the master's personal effects, must be applied therefore, like the amount recoverable for the loss of the ship herself, upon account of one-half the cargo, for which the owners and the master are alike responsible. After applying both these sums, on account of the half of the cargo for which the bark is responsible, there will still be a deficiency, which the steamer must make good. The result therefore, is that there must be a decree against the steamer for the whole loss of cargo, and also for the one-half of the steamer's effects.

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July 6, 1885.

PROPULSION POWER.

To the Editor of the Marine Record.

Inclosed is manuscript copy of a letter on propulsion power. The original has been mailed to the Secretary of the Navy, who has granted permission to have the letter published in your journal.

BOSTON, Sept. 2, 1885.

Hon. W. C. Whitney, Secretary of the Navy.

Dear Sir: In my letter to you of July 31, on naval fallacy, as now in vogue, I proposed in my next to confine myself mainly to propulsion power. As ships are now formed, when they lose that power and become unmanageable, they are doomed to destruction. It is not necessary for me to cite proofs of that fact. But if there were no others, the two missing iron clads in the China sea, and the late foundering of the German corvette, Augusta, in the Red Sea, are ample proof that ships as now formed are not equal to meet extraordinary natural powers or forces of the ocean. But before I write on the principles of the powers of propulsion, as applied in my new theory of safety ships, I will briefly again go over the ground of the no principles which now produce such ships as the Dolphin, and the German corvette Augusta. There is no fact better known than that such ships without ballast cannot stand up; also that when ballasted that they must be kept in a position so as to have a bearing on the water on both sides of them in rough times nearly the same as when in smooth water, so that they can not fall over from a change of the longitudinal gravitating center base. The ship in ballast is a balance, and is suspended on her buoyancy and held by her counterpoise (the ballast) just the same as if she was hung on her bilges and the longitudinal center of gravity lying between them. It is evident that to keep the ship safe these points must be kept equal or nearly so. In a rough time the position necessary in which these points are equal can only be maintained by her propulsion powers. It is a maxim that a ship's life is her buoyancy. It is also a maxim that as ships are now formed they depend solely in order to save the life of the ship, i. e., (retain her buoyancy) on her propulsion power. You, sir, have proved by the tests made by the Dolphin, how uncertain the mechanical power is as applied to her, by the breaking of her shaft on her first trial trip. It was reported at the time that her builder had said that any ship was liable to break her shaft at any time. Whether he said so or not, such is the fact, and the constant reports of overdue ships and missing ones fully prove it. That a ship could be so formed and constructed that she could not be deprived of her buoyancy by the forces of the ocean, even if she had lost her powers of propulsion, no man will dispute. This is what the new theory which I shall lay before you will give and has done, i. e., given a vessel, which is safe in any and all positions in rough water as long as she is afloat. (Not driven on shore.) That a ship's powers of propulsion should be such that they can be repaired at sea, no one will dispute; also that her powers should be such that if one or more breaks she would not be left helpless. The new theory covers these desirable points fully. She can have as many independent but auxiliary mechanical powers as may be desired. The small war ship, as I now have her before me in illustration, has four, i. e., wheels; these are fully protected both from the action of the wave and an enemy (in time of action). These shafts are short ones, and spare ones can be carried, and if one should break it can be taken out and be replaced with another in a short time. In fact, all parts of the wheels can be carried in duplicate, and will fit any of the wheels. In addition to her wheels she also has auxiliary sails on entirely different principles than now used, and such as are most effective, as they are mainly on the wind, carried on the windward side, and only to be used in extraordinarily high winds, and then not for the purpose of keeping the ship steady, but to add to her speed. She attains by the aid of her sails, on a course which no ship now in use can run, (i. e., in the trough of the waves), the greatest degree of speed possible, and the harder it blows the more speed she gets, and does this steadily, and no wave can break on or over her. In comparison with her movements in a rough time, which are made in perfect safety, the movements of other ships are the opposite, and the effects are distressing, and never safe when the ship becomes unmanageable. They cannot possibly be safe, as there is nothing in the naked form of the ships to protect them from the waves; they are wall sided, long, hollow troughs held in equipoise by their counterpoise, which when in the trough of the waves, the equipoise is destroyed and the counterpoise becomes the hammer which gives the blows that break up the ship. In fact, when they have lost their powers of propulsion they become a naked, helpless mass, and their forms as a whole and their components all act in unison in destroying the ship; her buoyancy then cannot possibly aid her, but on the contrary it becomes the most potent agent in her destruction; her counterpoise can then no longer hold her steady, as her longitudinal center of gravity is constantly changing, and the power of it which held the ship from falling over when in uniform water is now used to aid her buoyancy to destroy the ship.

As ships are now formed, their counterpoise in combination with their powers of propulsion actually constitute their life. It is true that their buoyancy floats them, but its office to give the ship stability only consists in giving them fulcrums one on each side of the ship for counterpoise to bear upon, and they are suspended on them. But when the ship's powers of propulsion have been lost, the form of the ship in its nakedness is such that the only position it can be in is in the trough of the waves. It is then that she alternately loses the fulcrum bearings of buoyancy and can bear only upon one at a time as the wave rolls from under her, and the ship must fall until she fetch up on the other, and as the other side has then been left without support, she instantly falls the other way. Much of this letter is a repetition of what I have said in my former letters, and in part of what I have said above. But truth will bear repetition, and cannot be told too much or too often in order to be understood. May it soon be well understood that the best ship now afloat, if unmanageable in extraordinarily rough weather, is then an inert mass in her nakedness, having nothing in her components to enable her to help herself. On the contrary her components combine to destroy her, as much so as if they had been designed for that purpose. In fact, she is fundamentally wrong, untrue and unsafe. May it also be soon well understood that the safety ship is one of a different character, true and safe, and far from being naked, on the contrary, she is clothed with buoyancy, and such as can only act for her benefit, and never become dormant as in other ships; and the forces of the ocean cannot deprive her of it under any circumstances as long as she is afloat. To begin with, her two ploughs which I have spoken of, in my last letter, constitute her floating buoyancy. This buoyancy has three offices to perform: one is to float the ship, one to give her stability, and one to lay a track for the ship to run on. In fact, the ploughs are the carriage under the ship on which she stands, and which remains, at all times, with buoyancy intact; no ballast is ever needed, and all loads of any kind are carried above the buoyancy and the water line of the ship, and not suspended as in other ships. From the water line down this plough buoyancy is broad spread and increases as it goes down, and gives a wide shallow dratt to the ship. From the water line upward commences buoyancy which does another kind of work, and enables the ship to be safe and take care of herself under all circumstances and in all positions in relation to the course of the waves. The office of the above water buoyancy is to so hold the ship that her longitudinal center of gravity cannot possibly change, and so that the ship cannot fall, cannot roll, cannot dive or pitch, and so that no wave can ever break over her. In fact, this new theory does all of its work with buoyancy, and gives to the ship a buoyant, unlimited stability instead of a counterpoise limited one. The two crafts now preparing for a national contest, i. e., the Puritan and Genesta, have in their component suspended stability. What point or principle will be made manifest by them? Simply that in one of them the limit of suspended power of counterpoise reaches further than in the other, i. e., that one for equal displacement can carry more sail than the other, and can stand up; or if both are equal in displacement and sail, one has a more powerful and better modeled fulcrum to meet sail pressure than the other. But they both have in them the limit to counterpoise power. I built in 1874, in Boston, the first plough vessel with unlimited stability, a craft that has been in a cyclone and carried all sail, and in many gales, and was never reefed. In one gale I run a distance of 11 miles with one of the best schooner (with a counterpoise stability) yachts belonging to Boston, and which was reefed to meet the limit of her stability; I ran at the rate of a mile in three minutes; the schooner ran at the rate of a mile in nine minutes. This was the only opportunity I had in three years to compare buoyant, unlimited stability with limited counterpoise stability, as the latter are not out in such gales; and at that time these were the only sails in sight about 9 a. m. The schooner rolled badly, and was deluged with water. My craft run steady and level, and no water came on her. The course was directly in the trough of the waves. My craft is now eleven years old,

and under the same circumstances would and can do the same with either the Puritan or the Genesta. Buoyant stability is now in its infancy, and as it is now in use in a crude form in the catamaran of the day, the idea of which was borrowed from the plough's unlimited stability. But they have in them not a moiety of the principles of the ploughs; but, as crude as they are, they have been ruled out of yacht races, and are now, with late improvements, reported to make 20 miles an hour, while at the best others can make but 12. But these are in no sense of the word practical vessels, and have not the ploughs. It is the ploughs which give both safety and speed. In fact, the ship bears wholly on her ploughs, and to this she owes her stability and steadiness. Their bearing is so broad and great that in comparison with other ships now in vogue, and having equal degree of tonnage. The ploughs do not draw one half as much water, and under all circumstances they hold the ship as firmly level or nearly so on the track they have made for her as the cars are held on the railroad track. In fact, the ploughs are the ship's track builders. Other ships have no means to build a track; they simply have a bearing on the water, and when they move rapidly ahead they move or throw away their forward bearing, i. e., throw the water from the forward end away from them and leave a vacuum for the aft end to pass into. This vacuum is instantly filled with water from some source. It cannot come from behind, as the ship is coming in that direction. It must come from forward, whence it does come, and with a strong opposing current against the ship's passage. This current is felt throughout the whole hull of the ship, as it has been formed by making a new bearing for the ship, and passing the water directly under her from forward to take the place of that which she has thrown away from her.

The lines of displacement and replacement forming the working surface of the ploughs are given to them by mathematics, and spring from the degree of speed the vessel has been designed to make. A vessel for excessive speed would be as much longer proportionally than one for less speed as the difference in the length of the radii of the replacing sections of the two vessels. It is not possible for the ploughs to form currents of water in opposition to the passage of the ship. Nor is it possible for them to displace any more water than the weight of the ship. Nor can they increase the natural resistance of the water. There is no fact now better known than that running ships as now formed while at great speed, realize that unnatural resistance of the water has increased from its natural resistance in geometrical progression or proportion. It is this resistance which the invention of the ploughs largely reduces, and they will do as much for speed and economy as has the compound engine. And if ever 30 or 40 miles in an hour is attained, it will be by combining these two inventions.

Yours very respectfully,
JOSEPH W. NORCROSS.

LITERARY NOTICES.

HARPER'S MAGAZINE for October is a strong number from every point of view. It is important, attractive and richly illustrated. Mr. C. H. Farnham concludes his interesting account, impressively illustrated, of his canoe trip along the coast of Labrador. William Hamilton Gibson contributes an instructive paper, entitled "Backyard Studies," with five charming illustrations. In the series of "Great American Industries" the third paper treats of hop growing and the manufacture of malt liquors, and is amply illustrated. George Parsons Lathrop describes the city of Hartford, giving especial attention to the "Nook Farm" literary group, consisting of Mark Twain, Charles Dudley Warner, and Mrs. Harriet Beecher Stowe. The article is profusely illustrated. After a long interval we have another instalment of Goldsmith's play, "She Stoops to Conquer" (nearly all of Act II.,) with thirteen illustrations by E. A. Abbey, one of which is the frontispiece to the number. In fiction we have the very best in Mrs. Woolson's "East Angels" and Howells's "Indian Summer."

THE ATLANTIC MONTHLY. A second instalment of Henry James' curious and interesting story, "The Princess Casamassima," is the opening paper in the October number of the Atlantic Monthly. Mrs. Oliphant and Dr. Holmes each give additional chapters of their serials, and there is a clear and pretty little Canadian story, "The Ogre of Ha Ha Bay," by Octave Thanet, remembered by all readers of the Atlantic as the author of "The Bishop's Vagabond." Mr. Warner continues his travels in the papers called "On Horseback," Horace E. Scudder has a second scholarly essay on "Childhood in English Literature and Art." There is an entertaining and original paper, "The First Abbe Galant," narrating the life of a certain agreeable ecclesiastic of the seventh century, besides an essay on birds, and two remarkable poems. Reviews of Stanley's "Congo," of Roosevelt's "Hunting Trips of a Ranchman," of Howells's "Silas Lapham" and some other new novels, with the usual departments, complete the number. Houghton, Mifflin & Co., Boston.

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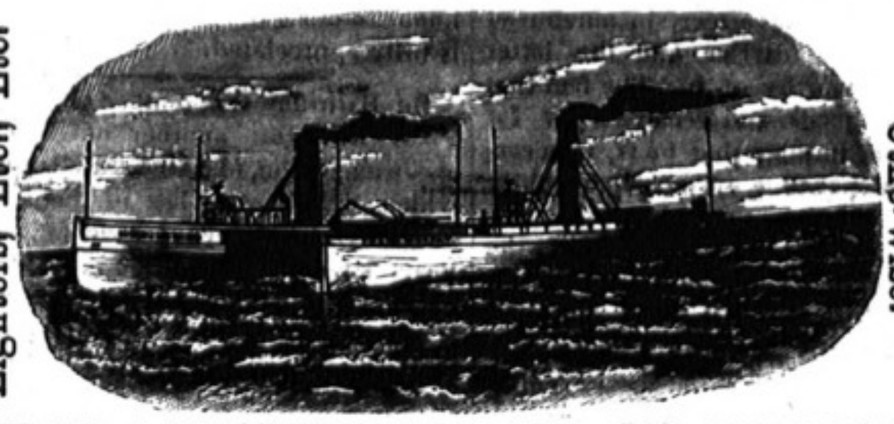
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OFFICIAL NUMBERS AND SIGNAL LETTERS.

TREASURY DEPARTMENT, BUREAU OF NAVIGATION, WASHINGTON, Sept. 18, 1885.

To the Editor of the Marine Record:

Following is a list of merchant vessels of the United States to which official numbers and signal letters were assigned by the Bureau of Navigation, Treasury Department, during the week ended Sept. 12, 1885:

Official Number.	Signal Letters.	Rig.	Name of Vessel.	Tonnage. Gross.	Net.	Home Port.
			SAIL VESSELS.			
106,375	.....	Sc.	Annie Cleveland.	7.96	7.30	Drummondtown, Va.
3,332	.....	Sc.	Batler,	7.57	7 12	do do
126,317	.....	Sc.	Clarence,	10.07	9 57	Cambridge, Md.
126,318	.....	Sc.	Gygnet.	8.50	8.07	Baltimore, Md.
120,626	.....	Sl.	Frank Foote,	9.96	9.46	New Haven, Conn.
140,788	.....	Sc.	L. L Shores.	9 66	9.17	Crisfield, Md.
91,787	.....	Sc.	Mary V..	5.59	5.37	Baltimore. Md.
110,682	.....	Sc.	Rebecca F. Brungate,	21.13	29.07	Philadelphia, Pa.
110,688	.....	Sl.	Rosa B.,	9.74	9 25	Dividing Greek, N. J.
116,0	.....	Sc.	Sarah Frances,	9.44	8 97	Baltimore, Md.
25,269	.....	Sc.	Urbane.	10.45	9.93	Cambridge, Md.
81,061	K D F L	Sc.	Wm. E. Dewnes,	753.95	716.26	New Haven, Conn.
			STEAM VESSELS.			
3,333	.....	St. s.	B. W. Arnold,	944.30	673.56	Port Huron, Mich.
91,788	.....	St s.	Margaret.	175.61	160.45	Newark, N. J.
116,068	.....	St. p.	San Soaquin, No 4,	865.43	292.96	San Francisco, Cal.
166,070	.....	St. s.	Satan.	11.27	8.41	Beverly, Mass.
			UNRIG'D VESSELS.			
67,252	.....	Barge.	No. 20,	84 12	79.92	New York, N. Y.

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Commencing Sunday, June 28 1885, at 12 o'clock noon the time given in the figures below is the new standard (Ninetieth meridian) time, which is thirty-three minutes slower than Cleveland time proper.

Eastward.	Arrive	Depart.
No 4. Fast Limited Express	*2 55 A M	*3 05 A M
No 8, N Y, B & A Express	*8 20 A M	*8 45 A M
No 26, Elyria Accommodation	†7 45 A M	.....
No 35, Buffalo Ac'm via Sandusky	†10 30 A M	†10 50 A M
No 35, Toledo Accom via Norwalk	†10 30 A M	†10 50 A M
No 12, N Y & B Fast Express	*2 20 P M	*2 45 P M
No 2, Night Ex via Norwalk	9 40 P M	†10 00 P M
No 22, Night Ex via Sandusky	†9 40 P M	.....
No 26, Conneaut Accommodation	†4 25 P M	.....
Westward.	**Arrive.**	**Depart.**
No 1, Fast Limited Express	*12 15 A M	*12 25 A M
No 23, Mich Express via Sandusky	*2 15 A M	
No 3, Chicago Express via " "	‡6 05 A M	6 30 A M
No 25, Mich Accom Norwalk	.....	†6 30 A M
No 21, Toledo Ex via Norwalk	†12 50 P M	†3 30 P M
No 5, St Louis Ex via Sandusky	*10 30 A M	*10 40 A M
No 9, Chi Pac Ex via Norwalk	6 15 P M	*6 40 P M
No 31, Elyria ac to Elyria only	.....	†4 30 P M
No 27. Conneaut Accommodation	†8 10 A M	.....

Sunday train for Nottingham—Depart 8:15 a. m. and 1:45 p. m.; returning, leave Nottingham at 8:50 a. m. and 3:45 p. m.

Reference marks—* Daily, † daily, except Sunday, ‡ daily, except Monday.

A local Cleveland and New York sleeper daily on No. 12, leaving Cleveland at 2.45 p. m.; arrive Grand Central depot, New York, 10.30 a. m.

For full information as to trains and connections apply at the Union ticket office, corner Bank and Superior streets, under Mercantile Bank.

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EASTWARD.	Arrive.	Depart.
Buffalo Accommodation	*10 40 A M	*10 45 A M
Chicago Accommodation	*9 02 P M	.....
Local Freight	*11 45 A M	*12 15 P M
WESTWARD.	**Arrive.**	**Depart.**
Chicago Accommodation	.....	*6 45 A M
Fostoria Accommodation	*4 46 P M	*4 51 P M
Local Freight	*12 20 P M	*12 50 P M

ROCKY RIVER ACCOMMODATION.
Depart—*7:45 a. m., *1:35 p. m., ‡10.50 a. m., ‡5.45 p. m., ‡1.35 p. m.
EUCLID ACCOMMODATION.
Depart—*6 24 a. m., *9:10 a. m,. *5:05 p. m., ‡8 45 a. m., ‡12.15 p. m., ‡4.25 p. m.
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CLEVELAND, OHIO, THURSDAY, SEPTEMBER 24.

WORK FOR THE LAKE CARRIERS' ASSOCIATION.

The Chicago Board of Trade has asked that a committee of the Lake Carriers' Association meet a committee of that body to consider and adopt the best form or essentials for a uniform bill of lading for lake and lake and rail commerce. This question is sadly in need of legislation, and, although it was brought before the House of Representatives last year by the James bill, nothing was evolved that let any light on the subject or promised to mend the present evils, as the provisions of that bill add still more responsibility to the carriers and deprive them, virtually, of any recourse before a federal court, in that "all goods and merchandise are subject to the conditions of the act, and should the agent or master refuse to issue a bill of lading, conforming with its provisions, clearance shall be refused by the custom house authorities until the bill of lading is granted, and the vessel shall be liable to an action *in reim* for damages to shippers." Bills of lading have, by custom of the law merchant, become a sort of negotiable or quasi-negotiable instrument, and, in the hands of a purchaser or *bona fide* holder for value, they represent the property described. This being the case both shippers and carriers should understand the various qualities, rights and obligations pertaining to such bills. The master, by signing the bill, promises to deliver the goods mentioned to A or his assigns. If A indorses this bill to any person, the person to whom it is indorsed, or who is the holder, becomes the assignee, and the promise of the master becomes good to said assignee, and the property in the goods vests in him. This indorsement transfers the property in the goods but not the right upon the contract itself, and the indorser can not maintain an action in his own name for the delivery of the goods nor for damages for their non-delivery. A mere memorandum of shipment will not have the effect of a bill of lading, neither will the delivery of the bill of lading, without indorsement, transfer the property in the goods shipped, nor will indorsement without delivery. The consigner is given, by law, a right of stoppage *in transitu* in case of the bankruptcy of the consignee. This right may sometimes be affected by the present form of bill of lading. That is, as the property may constructively pass into the possession of the consignee, so it may be transferred by him, before delivery, by indorsement of the bill of lading. Thus the consigner's right of stoppage *in transitu* may be defeated, provided the party to whom the bill of lading is indorsed and delivered gives a valuable consideration for such transfer.

At common law a common carrier was responsible for the carriage and delivery of the goods, and that responsibility extended to all losses, when the goods were definitely specified, except those sustained by act of God, or of a public enemy. The question now before us, and of which it is presumed the conference asked for will take cognizance, is how far this common law obligation of insurance can be limited by a uniform bill of lading. There is much conflict of opinion on this point, but it can be said with certainty that the limitation upon such liability must be reasonable, and must be assented to by the shipper, actually or constructively, but a limitation of all liability, even for negligence, will be disregarded from public policy, even though assented to by the consigner.

The shipper reposes a certain amount of confidence in the carrier and the latter makes himself worthy of it. The fact that he takes the goods and receives pay for transportation, implies that he is, to a certain extent, responsible. The responsibility can not rest wholly on one side. Let this idea become prevalent and where would the carrier stand in the course of time with the shipping public? But shippers, by the conditions of their bills of lading, are constantly weakening their degree of responsibility and therefore constantly weakening the confidence of the carrier in their integrity. The old form of bill of lading has been amended so often by the introduction of different clauses to cover a specific or imaginary purpose that it requires a shrewd lawyer to define what the bill of lading of the present day designs to set forth, which fact inclines us to say that the simpler and fewer the clauses in a bill of lading the better for all concerned. One clause in a bill that tries to shirk the responsibility of either of the contracting parties weakens the entire document, and in the interest of both carrier and shipper, it is to be hoped that the deliberations of the conference committee will be full of wisdom, and that a form will be adopted which will give satisfaction and confidence to the shipper and at the same time secure justice to the carrier, a bill of lading that can be honestly and persistently urged for universal adoption.

ABOUT THE FIRE BOAT.

We are in accord with "M. E." in the Leader, who writes regarding the propriety of inviting a New York city naval architect to design a fire boat for the protection of Cleveland shipping and property along the river. At a recent meeting of the board of fire commissioners it was decided that Cleveland must have a fire boat, and the advisability of asking a New York naval architect to come to Cleveland and tell them what they wanted, was discussed. Several of the commissioners paid a visit to New York City last fall to inspect the system of fire boats there in use, and many valuable points were obtained by them but the most prominent, to our way of thinking, was that fire boats were much superior to steamers during a fire among shipping and along a water-front, and very essential to the proper protection of property in such locality. What they learned regarding the proper construction of such boats will never be of much avail, not more so than details of the design adopted for the salt water boats. The board could not adopt a course that would promise more satisfaction than that of inviting our lake shipbuilding firms to make plans and specifications for the construction of an iron boat, have them considered by experts who are posted regarding the requirements of the craft which they desire to build for a fire boat, and adopt the plan which promises to be the most effective, and then invite the firms who have submitted the models to bid on the construction of the boat. The fact that a fire boat for service at this port should be of iron is paramount, as it should be apparent to the gentlemen of the board that a wooden boat, of the size contemplated, could not long defy the intense heat that the large boiler she must contain, in order to give her necessary power to work her engine and several pumps, would in a short time, burn out in the hull and require a rebuild. The need of a fire boat and an iron one was first suggested by the MARINE RECORD, and we are pleased to see that the matter is assuming a definite shape and hope that it will be urged to a certainty, but can not see the wisdom of applying to a salt water architect to specify how a fresh water boat should be constructed, especially as our lake shipbuilders are acknowledged to be as good naval architects as any in the country, workers in either iron or wood, as the many staunch, servicable boats on the lakes testify.

LAST week a commission of United States naval officers, consisting of a commander, first lieutenant and naval constructor appeared at Hingston & Son's boat works, near Jersey street, Buffalo. They had been sent by Secretary Whitney to examine Captain D. P. Dobbin's self-righting, bailing and unsubmergable life boat being finished there. The officers were in the city two or three days and after a critical examination returned much impressed by the many good qualities of a boat that is destined to come into universal use as a life boat. Captain Dobbins has spared no pains or expense to make the most perfect boat ever built and has secured patents on the invention but he has tendered the boats to the government and they are now in use at many of the life saving stations, free of the royalty which attaches to patented inventions. This attention from the Secretary of the Navy is an honor to our gallant superintendent which is fully appreciated.

On Saturday September 26, the Nickel Plate will run another of their popular cheap excursion, to Niagara Falls and return, which will be the last of the season. A special train of elegant coaches will leave Pearl street depot at 10:20 p. m. Broadway, 10:30 Euclid avenue 10:45 p. m. arriving at Niagara Falls 6:00 a. m. Sunday morning. Returning leave Niagara Falls 7:00 p. m., same day arriving in Cleveland 5:00 p. m. September 28. Tickets also good to return from Buffalo on regular trains September 28. Remember the date, September 26, and wait for it.

A PETITION has been in circulation for several days, urging the Canadian government to establish a life saving station on Point Au Pelle island, and it is hoped it may receive the attention it justly deserves There is no other point in the lake region where one is more deservedly needed than at that place, and it is surprising that it has not been attended to before.

[*Around the Lakes Continued from 1st Page.*]

SARNIA.

The latest report from the Quebec is not hopeful for the success of Captain Murphy's contract. The wreckers had succeeded in getting five chains under her, forward and to her arches; and by lifting on these with the pontoons, and hydraulic jacks, her bow was got off the bottom, and the tugs attempted to haul her towards shore. The tremendous strain of her weight, however, was too much for the chains, which snapped one after another, and the boat went to the bottom again, in almost exactly the same spot where she first went down except that her bow now points more shoreward. Since the accident the divers have succeeded in making four chains fast to the wreck and the tug Kate Williams was expected to arrive there last Saturday with 8,000 feet of new two-inch chain. Two additional pontoons were to be placed in position, and nine chains swept under the vessel. One more effort is to be made to lift her, and if the chains give way again the job will be abandoned until next year, as the weather is becoming unfavorable for wrecking operations. The underwriters have instructed Murphy to tow the Quebec to Owen Sound if she is raised. The general opinion among vessel men is that Captain Murphy will not have much of the $17,500 left by the time he gets the boat up.

PORT HURON.

Two boilers for Sault St. Marie waterworks will be supplied by the Phœnix iron works.

Love & Schofield, of this city, have the contract for furnishing the boilers for Fort Gratiot waterworks.

Delos Parker, of Marine City, is said to be after the position of duputy collector at that port, with a good chance of success.—*Commercial.*

It is said that Mark Hopkins, of St. Clair, has been raising the hair of New Yorkers by showing them what his steam yacht Permelia can do. The first of the week she made 29 miles in 1 hour and 13 minutes. She gets through the water at a terrific pace, and a common railroad train has no business looking cross eyed at her. Hopkins took her to New York to have a Hazelton boiler put in. It is claimed that since the change she is good for three miles more per hour.

MANITOWOC.

A telegram from Captain Sam Marshall Monday stated that the schooner Floretta had foundered about fifteen miles east of Manitowoc. She was bound from Escanaba for Chicago, and was laden with 550 tons of iron ore, which was consigned to the Joliet Steel Works. She probably sprung aleak and the water pouring into the hold, got beyond the control of the pumps, and the vessel went down because she was too far at sea to get assistance. The crew escaped in the small boat and rowed to Manitowoc. The Floretta belonges to the old class of canal vessels, and has been engaged in the Escanaba trade during the greater part of the season. She is owned by J. V. Taylor, of Chicago, and was commanded by Captain Sam Marshall. She was built in 1867 by Stupinski, of Detroit, was 320 tons burden, and was valued at $8,000. In her present position she is covered by thirty fathoms of water, and is practically beyond recovery. The vessel was insured in the hull part for $6,600 on a policy of the Phœnix Insurance Company, and the cargo was insured in the St. Paul Fire and Marine Company for its full value. The vessel's freight list was covered by a Continental policy.

DETROIT.

Special to the Marine Record.

Sept. 22.—The excursion season is about over, and probably the present week will wind it up entirely. The steamer Evening Star, which has met with liberal patronage, will continue until the close of the season, so that excursionists who may desire to visit Detroit from the Toledo district, will have no regrets or disappointments.

The steamer Keweenaw is laid up at this port for the season with profitable returns to her owners and without accident during the season and as heretofore as reliable as ever.

Captain J. G. Kiah, the efficient manager of the ninth life saving district, whose headquarters are at Sand Beach, has been spending a few days in this city. He reports all the stations under his control in first class order.

The missing vessel Wm. Home, concerning which considerable inquiry has been made, arrived here on Friday, in good shape, freighted with coal. She had met with adverse weather and was delayed a short time under Long Point, which made the voyage unusually tardy. The schooner Reindeer has also been accounted for.

The barge Waverly was robbed a night or two since of a hawser, 300 feet in length, and it is anxiously sought for. Such pilferings are almost of nightly occurrence, although not reported, and the only safety is the keeping of a night watch, whether anchored in the stream or alongside the dock.

Steamers from Lake Superior report fine weather in that locality, and more than usually warm at this stage of the season. Their arrivals and departures from here from this time out will be in accordance with the weather programme and not as billed heretofore.

The tug Kitty Haight, of Moffat's line, with the assistance of the schooner Pandora, lightered and pulled off the propeller Nebraska from Stag island.

Quinn Brothers, the submarine divers, have completed their contract on the Sand Beach breakwater.

The tug Winslow, of Grummond's line, rescued the barge Wyandotte from the beach at Oscoda, and brought her to this port. She is owned by T. C. Christie, of this city, and will be repaired by the Detroit Drydock Company.

Moffat's tug line has sent aid from here to the schooner Garibaldi, reported ashore at Johnson's Bay, some forty miles from St. Andrews. John S. Quinn, the submarine diver, has gone to assist in the rescue, and the tug Admiral has been fitted out for that purpose.

Standard time has gone into effect at this port, both as regards the movements of steamboats and railroads. By this new arrangement the steamer Ward leaves for Port Huron at 8:15 a. m., and Idlewild at 3:30 p. m. The Evening Star leaves for Toledo at 3:15 p. m.

The barge Wescott, stranded a few mornings since on Grosse Isle, Detroit river, caused, it is said, by Mama Juda light not being lit. She was got off by the tug Winslow without injury after some strong pulling.

Charters are quite limited and the outlook for the remainder of the season is by no means encouraging. The rates of last week have dropped to the old figures, 1½c. instead of 1¾c., which were of brief duration.

The schooner Starling, which stranded on Fishing Island, Lake Huron, last fall and abandoned for the season, has been rescued by the tug Charlton and taken to Southampton for further disposition. She is owned in Canada, on Lake Ontario, is 193 tons, and has been in service twelve years.

The Lake and River Excursion Company, of this city, have filed articles of incorporation, with a capital stock of $50,000. The directors are W. H. Miner, James Millen, A. A. Parker, A. N. Moffat, Thomas Barlum, Henry Howard, and J. K. Tillotson.

On Friday night Cornelius Howell, a colored cook on board the propeller Oconto, which was lying at the foot of Vinewood avenue, got on his metal and struck Wm. Crosby, the porter, with a marline spike, making a ghastly wound. Howell then jumped overboard and swam down stream and took safety in a lumber yard. He was soon afterward arrested by a policeman but was released, as the injured man refused to make a complaint for reasons that were not made manifest.

Mr. John Craig, the well known shipbuilder at Trenton, and who maintains a marine railway, has just laid the keel for a new barge of excellent model and design. The dimensions are as follows: Length of keel, 225 feet, and 37 feet beam; otherwise well proportioned. For whom she is intended or what purposes is at present a hidden secret, but in course of time will gradually develop.

The propeller Empire State, of the Lake Superior Transit line, and now on her upward passage is the last boat of that line to run on schedule time this season, but as regards the arrivals and departures, they will be filled as nearly as possible.

The schooner Kate Kelly loaded wheat at this port for Oswego at 3½c. freight. The schooner Wm. Home took on part of a cargo for Buffalo at 1¾c., and the propeller John Pridgeon at 1½c., to Buffalo.

The schooner Rival stranded on Pecho Island on Thursday night and after a few hours' delay was pulled off without injury.

The tug General McClellan, 108 tons burden, which has been in service since 1862, but has been out of commission for some time, was brought up from the lower end of the city and her machinery removed. Her engine is in good condition, 24x36, and well suited for a steam barge. The hull will be disposed of for a tow barge by her owner, Captain Grummond.

The propeller Ireland, en route to this port from Chatham, broke her engine while on Lake St. Clair Friday, and was picked up by the tug John Owen, which brought her to this port for repairs.

Captain Grummond has chartered the schooner Swallow to take ore from Escanaba to Wyandotte at 65c. freight.

Business at the Detroit Drydock Company's yards has been somewhat brisk the past week, and is improving. The work on the steamer Lansdowne has been completed; the new steamer City of Cleveland is being finished; the steamer Westford and consorts are being attended to; the propeller Forest City is being calked; the tug Champion and the barge Wyandotte have received extensive repairs.

The steamer Jay Cooke, for many years a favorite passenger boat between the Islands and Sandusky, came up here the other day for overhauling. Notwithstanding her sixteen years' service, her timbers were found in sound condition, and all that was required was some calking.

The steamer Ireland which met with an accident, has been taken into the Detroit drydock for repairs.

Captain Jones, of the propeller Syracuse, claims that his steamer is faster than the H. J. Jewett, and is willing to try it for $100 a side. Let Captain Jones test the speed of his boat through the lakes and have the time well authenticated, and there will be no necessity for side racing which is bad policy. Then let him tackle the Tioga and we will get at the bottom of the fastest time on the lakes after a while. HALL.

TOLEDO.

Special to the Marine Record.

Schooners Thomas Quayle and Negaunee are at the Columbus dock, loading coal for Milwaukee at 50c.

Schooners R. Hallaran and F. C. Leighton are at the Columbus dock, loading coal for Green Bay at 50c.

Schooners Augusta, Jas. R. Benson, W. R. Taylor, Abercorn and propeller Enterprise are here loading timber for Garden Island.

Schooner E. P. Beals which was chartered here about two weeks ago to hold a cargo of wheat for ¾c. a bushel to October 1, was towed to the D. & M. B. elevator to discharge her cargo to-day.

The dredges which are to work on the straight channel expect to go to work Wednesday morning.

Barge Shawnee is at the Columbus dock to load coal for Portage.

Schooners Riverside, Columbiana, E. R. Williams, and John Magee are at the upper coal shutes discharging their cargoes of hard coal.

Steamer Saginaw, which has been running here in the excursion business, left for Detroit last Thursday night to lay up.

Propeller Nashua which has been running here in the Ogdensburg trade, has pulled off to go into Ward's Green Bay line.

Steamer Mascotte, which has been running daily excursions to Point Place and Perrysburgh, has discontinued her trips, running only Saturdays and Sundays.

Dredges Buckeye State and General Mead, which have been at work on St. Clair flats, returned here to-day. Their contract is completed.

Propeller J. C. Gault of the Wabash line, is lying at the Wabash dock, waiting for a load to turn up.

Tug Stevens was in the dry dock last week to stop a leak, and the Mary A. Green to have her stern bearings tightened up.

Tug Empire, a canal tug, sunk in Swan creek last night. She will be raised to-morrow.

Propeller H. Calvin and consort Bavaria will arrive here this week to load coal for Weller's Bay.

Schooners Grace Holland and F. W. Gifford both discharged cargoes of iron ore here last week. J.

EAST SAGINAW.

Special to the Marine Record.

The advance in freights last week seemed to hurry up the shippers, as an extraordinary amount of lumber has gone out during the week. They are undoubtedly anticipating another rise in the near future. A large number of eastern buyers have been in the city, and it is understood that large sales have been made, and the barge men feel confident that their turn has at last come and that they should make up for lost time. Freights are firm and are quoted as follows: Bay City to Ohio, $1.25; East Saginaw to Ohio, $1.37½; Bay City to Buffalo and Tonawanda, $1.50; East Saginaw to Buffalo and Tonawanda, $1.62½.

The elegant new steam yacht N. H. Bruno, while on her second trial trip on Friday, struck a snag with her wheel, bending her shaft in bad shape. Her owner thinks steam yachts are always in trouble. The Bruno in her first trip split her cylinder head.

The propeller A. A. Turner left the river Monday with the barges Star of the North, J. A. Smith, B. M. Baker, Pacific, and J. E. Sparrow, all for Ohio.

Carkin, Stickney & Cram's shipyard is now in full blast again. There are four tugs, three dredges, and seven dump scows, all of them receiving repairs of some kind.

The barges Buckeye State and Montgomery took out over 1,000,000 feet of lumber Monday from Rust, Eaton & Co.'s docks.

Jas. H. Prentice, of this city, is having constructed a fast yacht, after a new idea that promises to eclipse the famous Stiletto. At any rate Jim says he is going to give her a trial. "Mum" is the word about the style of the model.

Captain George Johnson and Chas. Sonsmith, of the schooners Mattie C. Bell and Rosa Sonsmith, respectively, paid a flying visit to their families in this city while their boats are discharging ore at Ashtabula.

The steamer Mary Hess has been taken up the Cass river where her owner is using her as a floating wood sawing machine and wood yard combined, which promises to be quite a profitable investment this winter.

The tug Florence has taken out a passenger license for carrying boom men to and from their work. SHAW.

DULUTH.

Special to the Marine Record.

Enquiring around the coal docks I find that they are well up in stock on hand of hard coal, and the quantity yet required will not exceed over 25,000 or 30,000 tons, distributed among five companies, and they are expecting to have part of that carried for ballast. If that be so grain freights must go up higher than at present, else vessels cannot come here at a profit.

The schooner Niagara brought up 1,300 tons of railroad iron and the steamship Kasota 500 tons, both for the Northern Pacific.

A gang of sixteen grain trimmers employed by J. T. Rose on Wednesday trimmed the cargoes in four vessels, the big Onoko, the St. Magnus, St. Louis and Osceola, the combined cargoes of which was 155,000 bushels, in five hours.

The largest load of wheat ever taken out of Duluth harbor, or in fact the largest load of wheat ever floated on the lakes, if we remember aright, was that taken by the iron steamship Onoko on Thursday, 92,027 bushels.—*Duluth News.*

FRANKFORT.

Special to the Marine Record.

The owner of the old schooner Souvenir of Racine, traded his vessel this week for scow German of Detroit, receiving $200 to boot. Both vessels were lying weather bound in our harbor. The Souvenir was built at Milwaukee in 1854, is 83 tons. The German is also an old timer of 75 tons burden.

The past week has been a stormy one. Propeller Lawrence and Canadian steambarge Niagara were sheltered here.

Captain N. Robbins, superintendent of the life saving service, has been in town a few days, bringing with him Mr. Ezra Kelly, who will repaint Point Betsy life station. Mr. Kelly has just finished painting Manitou and Beaver island stations. Superintendent Robbins thinks that work will be commenced soon in building the new Frankfort life station. It will be a large building and have many improvements over those built heretofore.

The schooner Surprise, which sprung aleak at Charlevoix, was brought here by a tug to await fair weather to tow to Milwaukee. She leaks at the rate of four feet a day.

The United States steamer Warrington departed for Manistee. Steambarge Gratwick and two consorts sailed for Tonawanda with 2,000,000 feet of lumber. BURMEISTER.

BAY CITY.

Special to the Marine Record.

The propeller Wm. St. John arrived in the river Saturday night, in tow of the tug Witch of the West. She was landed at Roberts' dock and it was learned that when about four miles outside the can, the engine became disabled by the breaking of the spider cylinder head, etc. A new engineer had charge, who claims that his predecessor is to blame for the accident.

The new steamship launched at Wheeler's shipyard, for the Mills' Transportation Company, had her boiler tested last week, and in doing so, at a pressure of 135 pounds (cold water) one of the side sheets of the boiler gave out, which it will cost $200 to repair. It was a flaw in the steel.

The propeller Germania, Captain Pelkie, came in the river Sunday afternoon with the barges Myron Butman, H. C. Sprague, St. Joseph, Dolphin, and Waverly.

The scow John Enright left the river Sunday, lumber laden, for Warner's island.

The P. line barge B. M. Baker, was in Whittauer's drydock Saturday for a general calking.

The crew of the barge Cyclone, which was beached at Whitestone Point during the storm, passed through Bay City last evening on their way to Cleveland, where they will give testimony before the insurance board as to the necessity of beaching the boat.

The barge Keepsake, which was so roughly handled at Oscoda by the storm, was discharged from the Bay City drydock last night. Her bottom was found to be in a comparatively good condition. She is yet at the dock and will receive almost entirely new bulwarks and new stern. She will be ready to return to Oscoda about Monday. The steambarge Huron City went into the drydock last night for repairs to her arch.

The barge Iosco, belonging to Letcher & McLean, of Saginaw, which burned on Saginaw Bay recently, is to be converted into a lighter.

The Smith tug line are bringing immense shore rafts on the river daily, and report having plenty of work for the balance of the season.

The passenger boat Handy Boy, running on the Stone Island route, is said to be making more money than any similar raft on the Saginaw river.

J. A. Hall's yacht Hector has arrived in from a two week's cruise around Lake Huron.

Young Brothers, the enterprising coal dealers of Bay City, have made arrangements to supply coal boats at any hour, day or night, with the best of fuel, and steamboatmen visiting Bay City, will find this firm square people to deal with in every sense of the word.

At Murphy & Dorr's mill Monday afternoon the tug Tom Maytham had just taken the line of the barge Mary Birckhead when, without a moment's notice, crash came a full lumber pile across the tug's fantail, sinking her down as far as she would go, and then tumbled off into the river. James Montgomery, a fireman, had his left leg badly jammed, but no other damage was done. Had the pile fallen on the cabin, about five feet further forward, Engineer Davis would undoubtedly have had a close shave. The cause of the pile falling was owing to the tug's fantail having struck the spring piles on which the lumber rested, letting the front of the pile drop. SHAW.

SAND BEACH.

The schooner Pensaukee sunk inside the breakwater in twelve feet of water Tuesday. She is coal laden bound for Chicago. She sailed inside when the tug Smith took her line to tow her into better position, but in some way lost the line and could not get it again until the schooner had drifted into shoal water. As soon as she struck the captain scuttled her. She is lying easy.

CHARLOTTE.

Schooner John R. Noyes was driven ashore at this port about 3 o'clock Wednesday morning. At that hour the gale was raging with unbated fury, and when the steamship Monteagle and tow hove to off the harbor and signaled for a tug there was none that would venture to her assistance. Seeing no prospects of obtaining aid the captain of the Monteagle decided to try and get his consort inside as best he could, but just as the steamer entered the piers the tow line parted and the schooner John R. Noyes fell into the trough of the sea and drifted to the eastward of the piers, fetching up on the beach. The life savers trained their gun on the schooner, put a line in the rigging, sent out the breeches buoy and brought the crew ashore in safety. The Noyes was built at Algonac in 1872, measures 334 tons, and is owned by Captain S. Murray, of Oswego. She is valued at $10,000, and is insured in the hull pool.

RACINE.

Special to the Marine Record.

Tuesday afternoon at 2:15 o'clock Captain William Jones, of the life boat service at this place, was drowned while out practicing with his crew under the direction of Superintendent Rogers. The six members of the crew escaped. The disaster was caused by the prevailing northeast gale. The scene of the drowning was just off the end of the north pier in the harbor. The boat capsized and it is supposed Captain Jones lost his life preserver or that he was struck by the boat and disabled, as he was not seen to make any effort to save himself. Nothing could be done to save him. The body has not yet been recovered. A strong undertow was running, and it is feared the remains were carried out to sea. The accident is ascribed by the survivors of the crew to the condition of the boat, which they declare to have been unseaworthy. Lieut. Rogers is acquitted of all blame for the accident. Captain Jones was born in this city thirty-six years ago, his father being a well known lake Captain. John Jones, the deceased, began sailing when a boy, and was for some years mate of the schooner Rainbow. He was appointed Captain of the life saving crew last spring and had brought the men to a good state of discipline. He was much respected by his acquaintances, and his sad death is the occasion of deep sorrow in the city. His family consist, of a wife and two children. He was drowned in sight of the home of his aged parents, who live on the beach just back of the station.

Captain P. Spencer, one of the oldest and best known masters on the lakes, is dangerously sick. He retired from active life four years ago with a nice little fortune after forty years' service as a successful master. The last vessel he sailed was the schooner Rainbow, of which he was sole owner. His numerous friends will be sorry to learn of his serious illness. C. W. L.

SAULT STE. MARIE.

The heaviest northwest gale of the season prevails at this port. The storm struck here at 7 last night, accompanied by a hail and rain storm. The propeller Superior is aground two miles above the canal; went on in a storm last night. The propeller Alcona and consort, propeller J. E. Potts and consort, George Spencer and consorts, Butcher Boy, and schooner Brightie are in port. A large fleet of boats are sheltered behind Whitefish point.

THE resignation of Chas. H. Spaulding as assistant superintendent of the canal has been accepted. The Chippewa News says: "Mr. Spaulding is now devoting his time to the coal trade. Thomas Ermatinger, one of the oldest canal employes is temporarily filling his place. A more competent and trustworthy man could not be found to fill the place."

CHEBOYGAN.

The Leviathan released the schooner George Sherman and towed her to St. Helena Harbor Sunday morning. Half her cargo was taken out but saved. She is not leaking so badly that the pumps are kept working much. The Leviathan will tow her to her destination.

PETOSKEY.

Mary Hattie of Toledo, coal laden, went ashore 4 o'clock Tuesday morning at Bells' dock, five miles west of here and foundered in sixteen feet of water. All hands were saved. Her cargo is all right.

ADVERTISEMENT.

FAIRPORT HARBOR, OHIO.

U. S. ENGINEER OFFICE,
No. 292 PROSPECT STREET,
CLEVELAND, O., Sept 7, 1885.

SEALED PROPOSALS in triplicate will be received at this office until 11 o'clock a. m., Friday October 2, 1885, for the removal from the channel between piers at Fairport harbor, O., of the wreck and cargo of the schooner J. J. Hill.

Blanks for proposals and specifications and instructions to bidders can be obtained at this office. The United States reserves the right to reject any and all proposals.

L. COOPER OVERMAN,
Major of Engineers.

NOTICE TO OWNERS OF SCHOONER J. J. HILL.

U. S. ENGINEER OFFICE,
CLEVELAND, OHIO, August 29, 1885.

NOTICE is hereby given to owners and all other parties concerned in any manner with the schooner J. J. HILL or her cargo, now sunk in and obstructing the channel between piers at Fairport Harbor, Ohio, that they must remove said schooner and cargo from the channel within thirty days from this date. In case of failure on their part to do so, the vessel and cargo will be treated as abandoned and derelict and the Hon Secretary of War, in accordance with the 4th Section of the Act of Congress, approved June 14, 1880, will proceed to remove the same and to sell them at public auction for the benefit of the fund for the removal of such obstructions.

By order of the Secretary of War.

L. COOPER OVERMAN,
Major of Engineers.

CLEVELAND HARBOR, OHIO.

U. S. ENGINEER OFFICE,
CLEVELAND, OHIO, September 5, 1885.

SEALED PROPOSALS in triplicate, addressed to the undersigned, will be received at this office until 11 o'clock a. m., Monday, September 21, 1885, for delivering and placing eight hundred cords, more or less, of Rubble stone filling in the Breakwater, at Cleveland, Ohio.

Forms, specifications and other information can be obtained at this office.

The U. S. reserves the right to reject any or all proposals.

L. COOPER OVERMAN,
Major of Engineers.

HISTORY OF LAKE NAVIGATION.

BY J. W. HALL.

Written for the Marine Record:

CHAPTER XXXVI.

With this chapter we enter upon the records of 1847, a season more eventful in the loss of life and property than any preceding it. Navigation was resumed at Buffalo April 28, the steamer Chesapeake, Captain Warner, arriving on that date, the first boat in. The Straits of Mackinaw were clear April 28, the steamer Louisiana, Captain Davenport, the first boat through. The Erie canal May 1st. Quite a number of new craft were commissioned at the different lake ports, the district of Cuyahoga issuing a far greater quota than any other point, as follows:

STEAMERS.

Name.	Tonnage.	Value.
Hendrik Hudson	750	$60,000
Ohio	584	40.000
PROPELLERS.		
Manhattan	320	26,000
Pangassett	299	21,500
Boston	259	19,000
BRIGS.		
Mahoning	259	11,500
Pilgrim	242	9,680
Banner	431	17,248
Eureka	373	15,000
Concord	232	9,840
SCHOONERS.		
Sarah Green	119	4,760
Albatross	235	9.400
Dahlia	210	8,200
J. W. Brown	239	6,560
Trident	248	9,920
H. N. Gates	169	6,760
Courier	219	8,760
Raleigh	220	8,760
Speedwell	161	6.440
Wyoming	233	9,320
Industry	92	3,700
Ontonagon	217	8,680
Arabella	66	2,970
Thos. L. Hamer	109	4,300
Herald	219	8,760
Alpha	66	2,970
Rambler	138	5,520
Gipsy	181	7,240
William	188	7,520
Samuel Strong	223	8,920
Signal	161	6,440
J. M. Hughes	166	6,440
Lavinia	199	7,960
General Taylor	245	9,800
Leland	213	8,520
Telegraph	276	11,040
SCOWS.		
Rough and Ready	94	3,000
Anawan	43	1,720
Louisa	34	1,300
Oxford	49	1,960

The steamer Hendrik Hudson was built in the fall of 1846 and made two or three trips before the close of navigation, propelled by an engine which had been taken out of the steamer Empire. That fall she was sailed by Captain G. W. Jones, her builder. During the winter of 1847 she received her upper cabin and finish, and was complete in all her appointments early in the spring, and was taken command of by Captain D. Howe, formerly in the Empire.

Of the other new boats commissioned in 1847 were the steamboat America, built at Port Huron for J. H. Philips, of Detroit, of the following description: Her length was 230 feet, with an entire upper cabin and a large number of spacious bed rooms. She was propelled by two powerful high pressure engines. Captain L. H. Cotton who, during the fore part of the season had sailed the Oregon, owned also by Phillips, took command of the America, and J. W. Kelsey, first officer of the Oregon, sailed her the remainder of the season.

The hull of a mammoth boat was gotten out and launched at St. Clair for Captain Augustus Walker, to be called the Shakespeare, but was subsequently sold to Hazard & Monteith, Buffalo, who completed and named her the Empire State.

Two new steamers were commissioned at Monroe, named respectively the Southerner and Baltimore. The former was 180 feet long, built by Keating for Fifield & Sterling, and was sailed by Captain A. D. Perkins. She was 550 tons burden, and propelled by an engine from the steamer General Wayne. The Baltimore was 513 tons burden, 174 feet long, 26 feet 3 inches beam, and 11½ feet hold. Her engine was built at Buffalo with a horizontal cylinder 25⅝ inches and 126 horse power. She was built by G. N. Strong and first sailed by Captain E. A. Strong.

At Algonac a steamer called the Fashion was commissioned and owned by Lawson, Pangburn & Evans; Captain R. G. Evans as master. Gooding & McKay were the builders. The Fashion was 160 feet long, 25 feet beam, and 8½ feet hold. Her engine was low pressure, 36 inch cylinder, 9 feet stroke, manufactured at City Foundry, New York, by Rodman & Co. She first commenced plying between Port Huron and Sandusky, but as this did not meet the expectations of her owners she afterward ran between Detroit and the Sault, thence to Buffalo.

The steamer A. D. Patchin, built at Trumgo on the Detroit river, for Captain H. Whitaker, commenced plying in 1847 although she was partially constructed in 1846. She was 800 tons burden and a well gotten up boat, but did not survive many years. The steamer United States, for several years sailed by Captain Whitaker, was taken charge of by Captain James Norton.

The new steamer Ohio, built at Cleveland, was first sailed by Captain D. P. Nickerson. During the season she was taken charge of by James T. Gibson, formerly clerk of the steamer Empire. During the season of 1847 the steamer Cleveland was purchased of Sears & Griffith and Captain J. L. Edmunds, at Buffalo, by Captain Orson Shephard, and John D. Nollis, of Ashtabula, Captain Shephard sailing her on the route between Buffalo and Detroit.

One of the sad events during navigation was that of the schooner J. C. Dunn, which was capsized by a squall on Lake Erie while off Conneaut. The Dunn was from Sackett's Harbor, and was sailed by Captain Lyman Miner. The crew consisted of eleven persons, eight of whom were lost. Captain Miner, his cousin Edward Miner, Paul Dever and Dexter Whipple succeeded in getting upon the bottom of the vessel. During the night Dexter Whipple, the cook, died from fatigue. About 6 o'clock on the following morning the brig Uncle Sam took the remaining three off and landed them at Ashtabula. The names of the lost were William Finlay, of Clayton, mate; Francis Greeneye, of Sackett's Harbor; James Belonja, Clayton; Jacob Wood, Ellisburg; George Fry, Clayton; Charles Soles, Alexandria Bay; Edward Leeman, Clayton, seaman; and Dexter Whipple, cook. One of the lost was picked up by the steamer Saratoga, found lashed to the rigging, and another soon after, also fast in the rigging. The vessel was subsequently recovered and towed to Cleveland, where other bodies were found in the forecastle.

The details of the loss of the steamer Chesapeake, by collision with the schooner John A. Porter, Captain J. A. Thomas, in Lake Erie, with many lives during this season has been given in a previous chapter and need not be repeated here.

Captain Thomas was born in Wales, but brought up in Liverpool, England, and at the age of eleven years he stowed himself away on one of his uncle's ships that was leaving Liverpool at that time on a three years' cruise, and after the pilot had left them he came out on deck. The captain being a great friend of his uncle, and also thinking very much of the boy, of course, was very kind to him, and when he returned after his three years' trip, he was quite a sailor, and was permitted to continue on the ocean. Captain Thomas found his way to the lakes in 1832 and soon obtained command of a vessel. Although his education had been neglected, he was naturally quick to learn. After his sailor life commenced, he studied every thing that came in his reach, and mastered many foreign tongues, so that at the age of twenty years he could read and speak sixteen different languages, including Latin, Hebrew and Greek. His wife, with thirteen others, was drowned in Erie Bay in 1833.

The steamer Samuel Ward, built at Newport, River St. Clair, Captain E B. Ward, and the Baltic at Buffalo, and the Diamond at Buffalo, also commenced plying in 1847. The Ward was 450 tons burden, the two latter 825 and 336 tons respectively. Captain A. T. Kingman sailed the Baltic, and Captain Jacob Imson the Diamond.

It is reported that the managers of the Star Line of steamers, running between Port Huron and Detroit, contemplate building a new boat which will surpass anything in the way of passenger steamers yet produced on the lakes. The design is to build a screw steamer 225 feet in length and 34 feet beam, with guards projecting on either side only two feet wide. She will have three cylinders—the only steamer on the lakes thus equipped, and her boilers will be constructed of 1¼ inch steel, the heaviest yet employed in boiler construction on the lakes, and calculated to stand a tremendous strain. To be brief, it is the design to build the fastest and most beautiful craft afloat on the lakes. She will be guaranteed a speed of 20 miles an hour, and when completed will have cost in the neighborhood of $155,000.—*Port Huron Times.*

A Canadian vessel owner writes the Detroit Free Press a long letter taking, strong grounds against the existence of a harbor master at Sarnia. He says he cannot see the use of one. "In the matter of the rescue of wrecked property," he says, "there should be no restriction whatever. Any steamer, no matter what her nationality, should be free to go to the rescue of any other steamer or vessel in distress. If these questions could be left to the business men of both countries they would soon settle them to the satisfaction of all concerned. Let a commission be appointed partly of Americans and partly of Canadians, give vessel men a chance to be heard and this question in which we are mutually interested, would very soon receive a satisfactory solution."

RAFTING ON THE UPPER MISSISSIPPI RIVER.

Written for the Marine Record.

BY THE SECOND ENGINEER.

PART VI.

Reviewing in a desultory manner the history of mechanical industry we find it a difficult matter to keep pace with the improvements that follow a new invention. So in the case of the introduction of steamboat power as a fact or in the navigation of rafts. Unprotected by letters patent, the business did not remain satisfied with the simple innovations of the venturous Bradley, who had made the introduction of steam possible as well as profitable. The introduction of the steamer Union for raft towing was coeval with the closing scenes of the war. Rafting had already passed beyond its primeval conditions in many respects, inasmuch as the trips had come to be a question of more certainty, and were made quicker by the railroad facilities for transporting crew and kit back from market place to place of embarkation. The pilots had more thoroughly identified themselves with the business, as it stood them in hand to do, as the business was a remunerative one, the salary of some of them being as high as $4,000 for a season's work, while men running by the thousand had been known to make $15,000 in a single season.

The country contained in the Mississippi basin was rapidly developing, and railroads were communicating with other sections remote from the river districts, and the sale of lumber had developed so rapidly that it had taken its place among the reliable commercial industries of the northwest. However, there had been no difficulty, up to the introduction of steam in rafting, in keeping equal to all exigencies of the market by the slow and cumbrous floating process, and in consequence the pessmistic pilots discovered in the new and unlooked for innovation, the approaching avalanche that was to sweep their employment from them. Greater expediency in transportation of lumber had, in their imagination, clogged the avenues of sale in a single season, in fact, they thought that rafting was dead, killed by the exhaust of the steam engine. Improvement pushed onward so rapidly and quietly that to tell to whom the credit was due was beyond the power of any one. The first boat that was used having been small, made the fact that small boats alone could be utilized as raft towers a foregone conclusion. Bradley had made a trip by doing away with stern oars and using a steamboat for the purpose of a stern crew, so the next pilot concluded that he would keep the stern crew, get a boat, place her behind the raft, and let her shove while the raft was flanked from point to point by the oars as in floating. Still another pilot concluded to adopt Bradley's plan, place the boat side wise behind the raft, but take a larger and heavier raft and double team the bow, that is, put two men to each oar. Each system had more or less following, for it was but a short time before every second or third class steamer on the stream was in the rafting business, no boat being in demand if her fuel bill amounted to more than $6 or $10 a day. Finally one day there came a strange looking raft. She had a steamboat behind and the boat was swung from side to side as she towed down the river. The work of a new pilot who, silently noticing the progress made up to date, had swept everything away by an improvement that was greeted with delight. Remember, the progress of a raft, even to-day, is too slow and their weight too great to admit of much service from the rudder of steamboats towing them.

This new thought, then, was the extending of a line from each side of the steamboat, from a point a little aft of the center, between bow and stern, to each stern corner of the raft, and when so arranged the lines were made fast around a windlass. This windlass had a long sweep, and four or five men would take hold of this sweep, and the pilot on the bow would direct a man on the boat what to do. For instance, if they desired to turn the bow of the raft to the right they would slack off on one line and tighten up on the other, swinging the steamboat to shove the stern of the raft to the opposite way from which they desired the bow to go. Sometimes the raft would drag the boat over a sand bar and the action would snatch the windlass from the control of the men, and one or more of them would be knocked down, or sometimes one of them would be killed.

Again, only the lighter boats could be operated in this manner. Another drawback to success was the fact of the raft pilots not being steamboat men, hence it was awkward for them to handle a boat; beside there was no discipline whatever, the master and crew eating at the same table, as they had done in floating days.

The next step in improvement was to supplant the windlass and its man power for a steam windlass which they placed on the boat; the latter process has never been changed only so far as improvement in style of engine was concerned.

The next step in the line of improvement was the introduction of a larger steamboat, and boats built after the regular river towboat fashion, that is a stern wheel boat. The first regular tow boat introduced was looked upon as a failure before she had made a trip, for they did not imagine that a raft could make any money, towed by a boat that burned fuel like a Pittsburgh pool boat. The tow boat first introduced so being side wheel, one of the first boats built purposely for rafting was the side wheel iron steamer Clyde, which, with her geared engine (her wheels were worked by a cog wheel connection) proved to be very fast.

Soon all the side wheel steamers passed from the river, and stern wheel tow boats took their places, most of the earlier stern wheel boats having been former pool boats, from the Ohio river. The floating pilots became steamboat captains at a single bound, and had to learn to be steamboatmen.

THE WATERWAY LAUNCHED.

This morning was a great day—which is somewhat of a bull—on Lake avenue. The hydraulic dredge which has been some months in course of construction was launched to-day in presence of a large crowd. The stays were duly greased and in good order when the tug appeared, but the dredge took to the water on her own accord like a duck, and glided gently into Lake Superior amid hearty cheers. The launch was witnessed by Messrs. Newton, the inventor, Stuntz, Hubber, Walsh, and other prominent citizens. The naming of the craft was informal. No lady broke a bottle of wine on her bow and announced her name. George N. Stuntz invited the boys to celebrate the launch in flowing schooners and said:

My friends, we commit to the waves, this good craft which has been constructed by Duluth workmen of Duluth materials. She will soon be equipped with machinery made entirely in Duluth workshops. This vessel has the largest tonnage of any that has been constructed in this harbor. May her successful construction foreshadow the time when the bay will be crowded with shipping and steamships made of Minnesota iron shall be launched from our own shipyards. My friends, it has been deemed proper that this hydraulic dredge should be called the Waterway in order to keep in the minds of our citizens that projected system of water communication which alone is needed to link Lake Superior with the waters of the mighty Red river. As Duluth is the head of the greatest inland waterway in the world, it is proper that this dredge, the first of the kind built here, should bear that name. Boys; here's "success to the Waterway.

The sentiment was received with hearty cheers and the company went on board the Waterway, which was towed around to the slip to await the completion of her machinery, which will all be on board about a week hence.

It appears that Mr. Stuntz has received a number of hints as to the best name for the dredge. Some Democrats wanted him to call her the "Mesabe," others thought to name her "Cleveland" would secure the favor of the administration for Duluth. Republicans suggested the "Blaine and Logan" and prohibitionists the "St. John." Americans proposed the "Washington;" Germans the "Bismarck," Irishmen the "Brian Born," Frenchmen the "Napoleon," and Swedes the "Charles XII." C. F. Johnson is entitled to the credit of suggesting the "Waterway" and as Mr. Stuntz has been always an earnest advocate of the great project, he readily adopted that title.—*Duluth Herald.*

A CANAL STEAMER.

Nicholas Thelan of Skenectady, according to the Union has invented a steamer for the canals on the following plan:

She carries a ten horse power engine made by Westinghouse. In place of the usual shaft there are two shafts which are connected with plungers in two cylinders. The cylinders are two feet in diameter, and three feet long. The cylinders are open at both ends. The boat is to be propelled by plungers, which work in the cylinders with a thirty-four inch stroke. The plunger acts like an umbrella. It is formed of two pieces working on a swivel connected with the rod. When the plunger is at the rear end of the cylinder it is expanded but as it draws up it folds close together. The rod will move the plunger sixty times a minutes; displacing in that time about 2,000 gallons of water. The cylinders with the plungers are placed in the stern of the boat as near the keel as possible. In the stern are two recesses, divided by the keel. The recesses extend about nine feet from the stern. Mr. Thelan has tried his experiment with two cylinders in an ordinary row boat worked by hand and the experiment was very satisfactory. The idea is to use this new way of propulsion for canal boats. The inventor and backers of this new invention claim that it will draw three canal boats four miles an hour. A trial of speed and power will be held in a few days. The boat is named the Dorcas. She has a rudder, but the inventor says this is placed merely for convenience and that when the invention is placed on a canal boat it will do away with the helmsman, as the engineer will be able to steer the boat by means of the cylinders.

It is proposed to run a line of steamers from Leamington, Ont., to Sandusky, Ohio, in connection with the Leamington & St. Clair railroad, which will tap the Canada Southern division or the Michigan Central railroad at Comber, Ont. It is thought that such a line of steamers would be very popular with travelers from points south, particularly if the railroad between Windsor and Leamington for which charter has been granted is built as it will make the shortest route to Detroit, and will make a saving in the distance between Sandusky and Detroit of twenty miles, and for all points east and north of fifty miles, over any route now opened to travel. It is contemplated that this line be extended to the end of Point au Pelee, main land, from which even in the severest winter an open stretch of water extends east of Point au Pelee and Kelly Islands to the mouth of Sandusky bay, the ice being held to westward by the chain of islands stretching north and south. An all year line of steamers on that route would be perfectly practicable, as it was never know to be closed during the coldest winter.